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10/777,154	02/13/2004	Krishna V. Kotipalli	003797.00734	5107
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MICROSOFT CORPORATION ONE MICROSOFT WAY REDMOND, WA 98052-6399			EXAMINER SIEDLER, DOROTHY S	
			ART UNIT 2626	PAPER NUMBER
			NOTIFICATION DATE 06/07/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/777,154

Applicant(s)

KOTIPALLI, KRISHNA V.

Examiner

Dorothy Sarah Siedler

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2-13-04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This is the initial office action in response to the application filed February 13, 2004.

Claims 1-24 are pending and are considered below.

Claim Objections

Claims 11 and 16 objected to because of the following informalities: claims 11 and 16 recite, "A computer readable medium on which is stored computer executable instructions ", however this is grammatically incorrect. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1,5,6,10,11,15,20,21 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 5,12 and 24 recite, "wherein the phonetic input to the application", however the term "the application" is ambiguous. It is unclear if the claim limitation is drawn towards the "active application" previously recited or a different application. Therefore the examiner interprets "the application" as "the active application" this interpretation used throughout the remainder of the office action.

Claim 24 recites, "wherein the converted phonetic input to the application can alternatively be provided by a keyboard layout that is different from a keyboard layout associated with the language in which the phonetic input is received", however this is ambiguous. Therefore the examiner interprets this limitation as the same limitation recited in claims 5 and 15. This interpretation used throughout the remainder of this office action.

Claims 1,11 and 21 claim receiving and converting a "phonetic input" and claims 6 and 16 claim converting a text string into a "phonetic string", however this is ambiguous. The use of the word "phonetic" implies that an artificial character representing a phoneme, such a character from the International Phonetic Alphabet, is received as an input and converted into some other phonetic representation, such as that used by the International Civil Aviation Organization. However the invention is drawn towards normal text input and conversion using a standard keyboard, as evidenced by the specification and claims 2,12 and 22. In addition, the preamble of claims 6 and 16 claim a method for "transliteration of languages", transliteration defined as the conversion of *text* written in one language's writing system to another language's writing system. Therefore the use of the term "phonetic" renders the claim ambiguous, since a standard keyboard cannot accept phonetic characters as input. Claims 5,10,15,20, 24 are also rejected, since they also use the term "phonetic" in such a way that renders the claim ambiguous. Therefore the examiner interprets "phonetic" as text characters appropriate for the specific language. This interpretation used throughout the remainder of this office action..

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 11,6 and 21 are rejected under 35 U.S.C. 101 because he claimed invention is directed to non-statutory subject matter.

Claims 11,16 and 21 recite, "A computer-readable medium on which is stored/storing computer executable instructions" which do follow the requirements as set for by the Interim guidelines for appropriately claiming software. However, the specification (Page 7) lists data structures and carrier waves as acceptable communication media. Data structures and carrier waves are abstract ideas, and are non-statutory, therefore rendering claims 11,16 and 21 non-statutory.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Davis** (5,432,948) in view of **Yamabana** ("An Interactive Translation Support Facility for Non-Professional Users" ANLP 19971).

As per claims 1,6 and 11, **Davis** discloses a computer-implemented method for inputting languages into a computing device comprising:

Receiving text string input of a first alphabet (column 3 lines 19-22, *since the input method is through a keyboard, it must be text*);

Converting the text input to a language that uses a second alphabet, said converting based on a mapping scheme (column 3 lines 48-52 and lines 65-66, *transliteration is used to phonetically convert between different languages by mapping a string of native symbols to a string of foreign symbols*);

and passing the converted text input to an active application executing on the computing device (column 10 lines 26-28, *the inter-script transliteration is used in conjunction with a word processing engine*).

Davis does not disclose hooking the text input. **Yamabana** discloses a system that translates input text from one language to another, using a standard hook and IME API (page 330, first paragraph).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to hook the text input in **Davis**, since it would allow the transliteration to

be used as an add on function to any application, enabling the user to work in a familiar document writing environment, as stated in **Yamabana** (page 330, first paragraph).

As per claim 16, **Davis** discloses a computer readable medium on which are stored computer executable instructions that cause a computer to perform a method for transliterating languages in a computing device comprising:

Receiving a text string in a first language of a first alphabet (column 3 lines 19-22, *since the input method is through a keyboard, it must be text and it must be phonetic*);

Converting the text string to a text string in a second alphabet, based on a first predefined phonetic mapping scheme (column 3 lines 48-52 and lines 65-66, *transliteration is used to phonetically convert between different languages by mapping a string of native symbols to a string of foreign symbols*);

However **Davis** does not disclose converting the text string into a second language of a third alphabet, based on a second predefined phonetic mapping scheme. **Davis** does disclose a system that can perform transliteration from one language to many different languages (column 4 lines 27-33). **Davis** also indicates that transcription from a foreign to a native script is generally ambiguous depending on the languages, for example Roman to Japanese (column 3 line 65 column 4 line 3). Therefore transcriptions from English to Japanese, Arabic, or Mandarin, or similar languages, may be ambiguous. There may be languages where a complete transliteration between a first and second

language is not known. In these cases a preliminary translation may be necessary, for example to translate from English to Arabic, then from Arabic to Farsi. The mapping from English to Arabic, then from Arabic to Farsi can be used to transliterate English to Farsi. This method can also be use for dialects, for example from English to formal Arabic, then from formal Arabic to any of its dialects.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to convert the text string into a second language of a third alphabet, based on a second predefined phonetic mapping scheme in **Davis**, in order to map a text string in one language to a text string in another language using a preliminary mapping, for the instance where a direct mapping from the first to second language is now known.

As per claim 21, **Davis** discloses a computer readable medium storing computer executable instructions that cause a computer to perform a method for inputting languages into a computing device, said method comprising:

Receiving text input of a first alphabet, said text input intended by a user as input for an active application executing on the computing device (column 3 lines 19-22, *since the input method is through a keyboard, it must be text and it must be phonetic*);

However **Davis** does not disclose intercepting the text input by an intermediate application prior to receipt by the active application executing on the computing device,

converting the text input by the intermediate application to a language that uses a second alphabet, said converting based on a mapping scheme, and passing the converted phonetic input to the active application executing on the computing device.

Davis does disclose converting the text input to a language that uses a second alphabet (column 3 lines 48-52 and lines 65-66, *transliteration is used to phonetically convert between different languages by mapping a string of native symbols to a string of foreign symbols*), and passing the converted text input to an active application executing on the computing device (column 10 lines 26-28, *the inter-script transliteration is used in conjunction with a word processing engine*). **Yamabana** discloses a system that translates input text from one language to another, using a standard hook and IME API (page 330, first paragraph) as an intermediate application.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to intercept the text input by an intermediate application prior to receipt by the active application executing on the computing device and convert the text input by the intermediate application to a language that uses a second alphabet in **Davis**, since it would allow the transliteration to be used as an add on function to any application, enabling the user to work in a familiar document writing environment, as stated in **Yamabana** (page 330, first paragraph).

As per claims 2 and 12, **Davis** discloses the method of claims 1 and 11, however **Davis** does not disclose wherein the hooking step comprises a keyboard hook trapping the input. **Yamabana** discloses a system that translates input text from one language to another, using a standard hook and IME API (page 330, first paragraph) as an intermediate application. The system of **Yamabana** is intended for use in a word processing environment, which inherently accepts keyboard input. Therefore the hook must have been used to process all keyboard input, i.e. text input, and direct it to the IME API.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a keyboard hook to trap the input in **Davis**, since it would enable the system to ensure that all the pertinent input, i.e. keyboard text input, is transliterated according to the settings chosen by the user, thus increasing the accuracy of the output transliteration.

As per claims 3,13 and 22, **Davis** in view of **Yamabana** disclose the method of claims 1,11 and 21, however **Davis** does not disclose wherein the hooking step occurs at the system-wide level. **Yamabana** discloses a system that translates input text from one language to another, using a standard hook and IME API (page 330, first paragraph) as an intermediate application. The system of **Yamabana** uses the hook to direct all input to the IME API for translation prior to directing it to the word processing program. Since text input, from for example a keyboard, is input at the system level, the hook must have been implemented at the system level.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a keyboard hook at the system level in **Davis**, since it would enable the system to ensure that all the pertinent input, i.e. keyboard text input, is transliterated according to the settings chosen by the user, thus increasing the accuracy of the output transliteration.

As per claims 4, 14 and 23, **Davis** in view of **Yamabana** disclose the method of claims 3, 13 and 21, however **Davis** does not disclose wherein an active accessibility API is used to keep track of the active application. **Yamabana** discloses a system that translates input text from one language to another, using a standard hook and IME API (page 330, first paragraph) as an intermediate application. In addition, API's are generally used as an interface to perform specific functionality, as requested by a computer program. The functionality described by the API can include several classes or several related functions, or a single function or procedure. An API enables functionality to be realized with the use of a function call, rather than describing of how information is organized in memory addresses and system registers.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use an active accessibility API to keep track of the active application in **Davis**, since there are many already developed fully functional API's available, for example the Windows API of WinAPI, thus saving time and resources needed to develop an API.

As per claims 5,15 and 24, **Davis** in view of **Yamabana** disclose the method of claims 1 and 11, and **Davis** further discloses wherein the text input to the application is provided by a keyboard layout that is different from the language to which the text input is converted (column 3 lines 48-52, *transliteration is used to convert between languages, for example to Japanese using a Roman keyboard*).

As per claims 7 and 17, **Davis** in view of **Yamabana** disclose the method of claims 6 and 16, however **Davis** does not explicitly disclose displaying a system-level menu bar with menu items, the menu items including an option to transliterate the text string, wherein the converting steps are initiated by selecting the transliterate option. **Davis** does disclose a user interface used during transliteration (Figure 5). In addition, user interfaces are traditionally used to improve interaction between a user and an application, providing a visualization of control functions.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have system level menu bar with menu items, which can be selected to initiate the transliteration in **Davis**, since it would provide the user with easy access to control of the application.

As per claims 8 and 18, **Davis** in view of **Yamabana** disclose the method of claims 6 and 16, and **Davis** further discloses wherein the first language is a western language and the second language is an Indic language (column 4 lines 27-30).

As per claim 9 and 19, **Davis** in view of **Yamabana** disclose the method of claims 6 and 16, however **Davis** does not explicitly disclose wherein the first language is an Indic language and the second language is another Indic language. **Davis** does disclose a system that performs transliterations on various languages, including Devanagari (Hindi). There may be languages where a complete transliteration between a first and second language is not known. In these cases a preliminary translation may be necessary, for example to translate from English to Arabic, then from Arabic to Farsi. The mapping from English to Arabic, then from Arabic to Farsi can be used to transliterate English to Farsi. This method can also be use for dialects, for example from English to formal Arabic, then from formal Arabic to any of its dialects.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to transliterate between Indic languages in **Davis**, in order to map a phonetic string in one language to a phonetic string in another language using a preliminary mapping, for the instance where a direct mapping from the first to second language is now known.

Art Unit: 2626

As per claims 10 and 20, **Davis** in view of **Yamabana** disclose the method of claims 6 and 16, and **Davis** further comprising displaying the converted text string on an output device (Figure 6, *the transliteration as it would appear on the user's display*).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see the PTO-892.

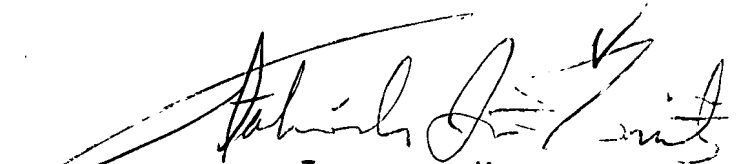
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dorothy Sarah Siedler whose telephone number is 571-270-1067. The examiner can normally be reached on Mon-Thur 9:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on 571-272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2626

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DSS



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PRIMARY EXAMINER